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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/599,150

09/21/2006

Masashi Ohtsuki

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5019

23373 7590 10/18/2007  
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EXAMINER

MARTIN, ANGELA J

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

10/18/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/599,150

**Applicant(s)**

OHTSUKI ET AL.

**Examiner**

Angela J. Martin

**Art Unit**

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 9/21/06.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Masami et al., JP 2003-249233.

Rejection of claims 1-4, 9-11 drawn to an additive for an electrolyte.

Masami et al., teach an additive for a non-aqueous electrolyte in a battery composed of a phosphazene compound represented by the following formula (I):  
(NPX.sub.2).sub.n (I) (wherein Xs are independently a halogen element, and n is an integer of 3-15) (0011-0013) and containing at least two kinds of halogen elements (0072-0073). An additive for a non-aqueous electrolyte in a battery according to claim 1, wherein the phosphazene compound contains fluorine and chlorine (0072-0073). An additive for a non-aqueous electrolyte in a battery according to claim 2, wherein Xs in the formula (I) are independently fluorine or chlorine (0072-0073). An additive for a non-aqueous electrolyte in a battery according to claim 1, wherein n in the formula (I) is 3-5 (0014). A non-aqueous electrolyte for a battery comprising an additive for a non-aqueous electrolyte in a battery as claimed in claim 1, an aprotic organic solvent and a support salt (0096-0097). A non-aqueous electrolyte for a battery according to claim 9,

Art Unit: 1795

wherein a difference of a boiling point between the aprotic organic solvent and the additive for the non-aqueous electrolyte in the battery is not more than 25.degree. C (0081). A non-aqueous electrolyte battery comprising a non-aqueous electrolyte for a battery as claimed in claim 9, a positive electrode and a negative electrode (abstract; 0126).

Thus, the claims are anticipated.

***Claim Rejections - 35 USC § 102/103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5-8 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Masami et al., JP 2003-249233.

Masami et al., teach an additive for a non-aqueous electrolyte as described above.

Thus, the claims are anticipated.

However, if the claims are not anticipated by Masami et al., in the alternative, the claims are obvious over Masami et al., because although the prior art of record does not recite an additive for a non-aqueous electrolyte in a battery according to claim 3 or 4, wherein n in the formula (I) is 3, and one to three of six Xs is chlorine and the others are

Art Unit: 1795

fluorine, it teaches that chlorine may be included along with the fluorine (0072).

Although Masami et al., do not recite an additive for a non-aqueous electrolyte in a battery according to claim 3 or 4, wherein n in the formula (I) is 4, and one to five of eight Xs is chlorine and the others are fluorine, it teaches that chlorine may be included along with the fluorine (0072). Although Masami et al., do not recite an additive for a non-aqueous electrolyte in a battery according to claim 5, wherein the phosphazene compound contains at least two chlorine atoms in its molecule, and each of the chlorine atoms is bonded with a different phosphorus atom, respectively, it teaches that chlorine may be included on the phosphazene compound (0072). Although Masami et al., do not recite an additive for a non-aqueous electrolyte in a battery according to claim 1, wherein the phosphazene compound has a freezing point of not more than -5.degree . C, the value of n would determine the freezing point of the phosphazene compound.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hiroko et al., JP 2003-077532, teach a phosphazene compound in the electrolyte of a nonaqueous electrolyte battery.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela J. Martin whose telephone number is 571-272-

Art Unit: 1795

1288. The examiner can normally be reached on Monday-Friday from 10:00 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AJM

